



# The Globe

Fall 2007

EARTH CONTACT PRODUCTS, LLC



## Welcome!

This newsletter is to inform and educate all those who have an interest in Earth Contact Products line of steel foundation products.

Inside you will find a case study from one of our installers in Utah. The job required ninety-seven ECP Model 350 Steel Piers™ driven to average depth of 29 ft. to raise the building back to it's original height.

Our "Business Center" section is filled with marketing hints to help generate sales and make your staff more productive. Also, we will provide you with insurance advice and other industry specific information.

The "Job Box" section highlights useful industry related tools that may help you become a more efficient, effective contractor.

If you would like to see something in the next issues please let us know.

[earthcontactproducts.com](http://earthcontactproducts.com)

## A Tale of Two Projects

**A comparison of a drilled shaft project and a helical pier project**

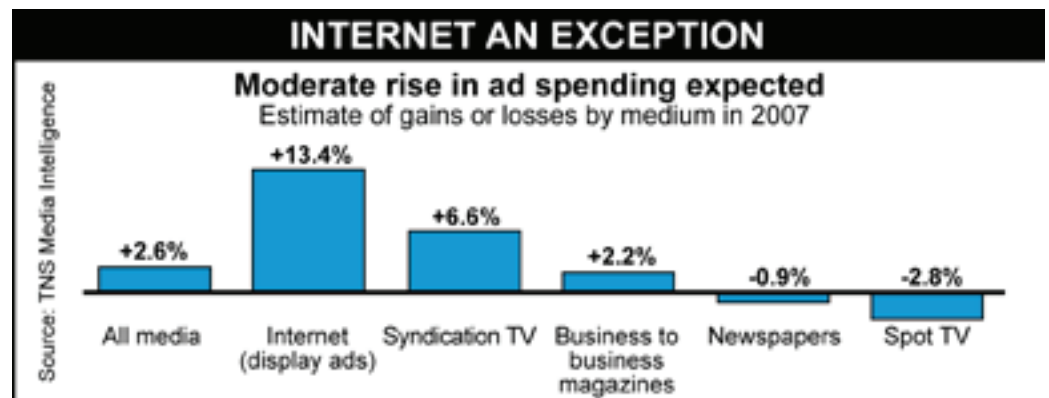
It is the slower and more complicated of times. It is the faster and easier of times.

In Fort Collins, Colorado, two construction projects are currently underway. Each project will result in combination 3 or 4 story retail/residential structures. The projects were started nearly simultaneously, and they are situated only about three football fields apart from one another - close enough to stand at one site and see the equipment on the other site. Judging from the size of the



footprints at each site, the structures will be similar in size, and the approved plans indicate they will have similar structure loads. So what makes these two projects different? Well, the deep foundation solution for the first project is drilled shafts, while the deep foundation solution chosen for second project is helical piers. The 1st project (let's call it "The Shaft Project") is a typical drilled shaft project. The jobsite is characterized by many pieces of equipment including a large drill rig, a concrete pump, an excavator, a large dump truck, large numbers of laborers, literally tons of rebar, and even more laborers assembling rebar cages. There are typically a slew of things happening all at once. The drill rig is auguring 24" & 36" diameter, 20' deep shafts. Did I mention there is ground water at

- Continued on Page 5



*Earth Contact Products will be "The Very Best" manufacturer in our industry by providing quality products and services in a timely manner at a competitive price.*

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## A Prospects Perspective: 4 Keys

There is nothing more important in our business than closing sales. Salespeople are always hungry for new ways to create value and close more sales. Our job is to give these salespeople the essential keys to success so that they can translate value in a way that not only makes sense to prospects, but also motivates them to buy now.

Adding value has 4 Essential Keys

### 1). Return on Investment

Numbers don't lie. Nothing makes a stronger case for value than breaking down your offer in terms of benefits. Leading salespeople look at all possible ways the prospect can benefit (e.g. little disturbance to site, higher capacities, verifiable capacity, quality of installation, ect.)

### 2). Make it Visual

Pictures and graphics can increase the persuasiveness of a presentation as much as 47%. Numbers and statistics are much more compelling when graphics are involved, and the likely hood of your prospect grasping and retaining what you are saying will increase greatly. PowerPoint and hard copy graphics take more time and effort to create, but the increase in closings will offset these efforts. Once you have developed your template for key advantages and statistics simply plug in numbers to create updated charts and quotes for new presentations.

### 3). Differentiate your Products

Odds are your prospects' decision will hinge on two things:

- What you can offer that your competitors cannot
- How effective your company is at solving their problem

Top salespeople focus on benefits that are exclusive to their company and translate those benefits in a way that creates an urgency to buy and explains everything in terms of how it will satisfy their needs.

Too often salespeople say all of the right things, but fail to communicate why the prospect needs their products or services now. The resulting stall puts the sale on the back burner until they are compelled to buy.

### 4). Focus on the Customer

Prospects are only interested in how your products and services can benefit them.

- Create a list of your biggest selling points
- Create a list if how each point benefits the prospect

With these lists, you will maximize the impact of each presentation, and create an urgency to buy, The most important question any salesperson has to answer is, why does a prospect need to purchase my product? By implementing, the 4 essential keys of adding value to every presentation your salespeople will close more sales creating more profit.

Info: "Your Value Proposition- Creating an Impact", by Tom Sant

### Foundation Industry Upcoming Events:

**DFI: 32nd Annual Conference on Deep Foundations**  
The Broadmoor  
Colorado Springs, CO  
October 11-13, 2007

**ECP Seminar World of Concrete**  
Las Vegas, NV  
January 21, 2008

**DFI: Helical Foundation and Tieback Specialty Seminar**  
New Orleans, LA  
November 16, 2007

**World of Concrete**  
Las Vegas Convention Ctr.  
Las Vegas, NV  
January 22-25, 2007

# CASE HISTORY

## ECP STEEL PIERS™ STANDARD MODEL 350



**Dixie National  
Forest Service Office,  
Cedar City, UT**



Earth Contact Products' Steel Piers™ were selected to support and restore this office building after the owner determined that the entire structure had settled between 1/8 inch and 3-5/8 inches. The settlement was most likely caused by consolidation of fill soil on the lot. Merit Structures and Restoration Company from Midvale, Utah installed ninety seven ECP Model 350 Steel Pier™ systems to recover lost elevations.



Project Summary	
Project:	Dixie National Forest Service Office Building Cedar City, Utah
Installing Contractor:	Merit Structural and Restorations Midvale, Utah
Product Installed:	Model 350 ECP Steel Pier™
Number of Placements:	97
Average Depth:	29.2 ft
Recovered Elevation:	1/8" to 3-5/8"
Ultimate Capacity:	99,000 lb
Average Test Load:	57,146 lb
Average Working Load:	22,277 lb
Factor of Safety:	2.55 : 1 Test Load to Working Load 4.42 : 1 Ultimate To Working Load

The Model 350 ECP Steel Pier™ System installed here used a 3-1/2 inch diameter tubular steel pier that was hydraulically driven to as deep as 54 feet below the footing to reach a geologic stratum that provided the suitable end bearing for supporting the structure.

*Photographs: At the top is a view of the settled structure showing the large depth of fill below the foundation. At top right the excavations are prepared at pier locations along the perimeter of the structure. Above right shows how the foundation was prepared for mounting the pier bracket. The technician is smoothing the face of the stem wall. The bearing area under the footing was also similarly prepared. At right a technician installs one of the drive stands that were used to advance the pier pipe through the soil to end bearing.*



Each pier was advanced through the consolidating soil until the pier encountered firm load bearing. Once reached, each ECP Steel Pier™ was field load tested against this bearing stratum to a force greater what was required to support the structure. Field load testing each pier after reaching end resistance verified that the bearing stratum was suitable for long term support. This load testing also determined a factor of safety for each pier placement against future settlement. In the case of this project, the field test loads were on average 155% percent above the working load requirements providing an average factor of safety over 2.5!



At each pier location a pier bracket was attached to the foundation. Once all piers were installed to end bearing and the load capacity verified, the structural load was transferred from the failing soil under the structure to the verified bearing stratum deep below the surface. This gentle and uniform load transfer was accomplished by banks of hydraulic jacks that were all connected through manifolds to electric hydraulic pumps. One jack was installed on each pier bracket to accomplish the load transfer and recovery of lost elevation.



There was minimal disturbance to the building's occupants during the restoration process. Because ECP Steel Piers™ were installed using quiet, vibration free hydraulics, it was "business as usual" in the office during the underpinning installation.



*Photographs: Above the technicians are installing pier pipe using quiet and vibration free hydraulics. At left center, the structural load is being transferred from the concrete footing to the pier systems using multiple hydraulic jacks. At left, one can see how the columns were lifted along with the building. One steel pier was situated on each side of the column footing making lifting the columns a simple procedure. The photo at bottom left shows how recovering the lost elevation was accomplished. All hydraulic jacks were connected together through a manifold system and actuated using electric pumps for gentle and uniform lifting. Below are views of two Model 350 ECP Steel Pier™ placements. Notice amount of lift accomplished on this project and the final configuration of the pier system.*



## A Tale of Two Projects - Continued from Page 1

around 10 feet? Yes, that means these shafts need to be cased. Once the drill rig moves on to the next shaft, an excavator moves in with a dump truck and the drill spoils are removed from the site. Because of the ground water, the shaft needs to be dewatered before the concrete can be poured. The dump truck leaves, and the excavator is used to lower the rebar cage into the shaft. Forms are then placed above the shaft with the anchor bolts in position and everything is made ready for the concrete. The concrete pump and ready mix truck now roll into place, and the shaft is filled with concrete.



Each shaft was taking about one hour to drill, another hour for spoil removal and rebar cage placement, another hour for form & anchor bolt placement, another half hour for concrete - oh, and then five days for curing. When I asked the foreman how long it would take until the foundations were complete, he said, "We're hoping for three weeks".

The 2nd project (let's call it "The Already Done Project") on the other hand is a typical helical pier project. This jobsite is characterized by only two pieces of equipment - twin excavators, considerably fewer laborers, and the helical piers awaiting installation. In the 30 minutes I was on site, five piers were installed. Next, a team of three men were

using a laser level to determine final elevation before torching the tops of the piers off and welding on the pier caps.

When I asked the site foreman how long it would take to complete the deep foundations for this project, his response was, "We'll be done in a week."

Two projects of similar size and shape. That is where the similarities end however. Aside from being faster and easier, the helical pier foundation project was likely cheaper also. Luckily the weather was cooperative, and neither project has hampered by inclement weather. If the projects would have been subjected to pouring rain, snow, or sleet, the helical project would not have skipped a beat. The drilled shaft project would have slowed dramatically.



In addition to the obvious advantages of a shorter project timeline and lower labor costs for the deep foundation phase of the project, other less tangible advantages and benefits include:

- Less interest incurring on the unused real estate
- Reduced project insurance
- Potential incentives for early completion
- Reduced traffic control if applicable
- Lower project management costs
- Improved workplace safety

Article provided by Rich Davis, *Helical Pier World*

Marian Technologies

## PT-Tracker

Model 1013



The PT-Tracker is the field-proven industry standard for helical pier/anchor torque indication and data logging. It provides the most accurate pressure, differential pressure and torque readings. It differs from the other methods of installation monitoring in that it creates an electronic data log of the entire installation process. This data can be transferred to a PC and graphs can be easily generated using the application software that comes with the unit. Data can also be manipulated using typical spreadsheet software such as Microsoft® Excel. By looking at the plotted data it is possible to imply pier depth information and cross check actual material usages.

## Notable Quotes

**Perseverance is failing 19 times and succeeding the 20th.**

- Julie Andrews

**There's a way to do it better....find it!**

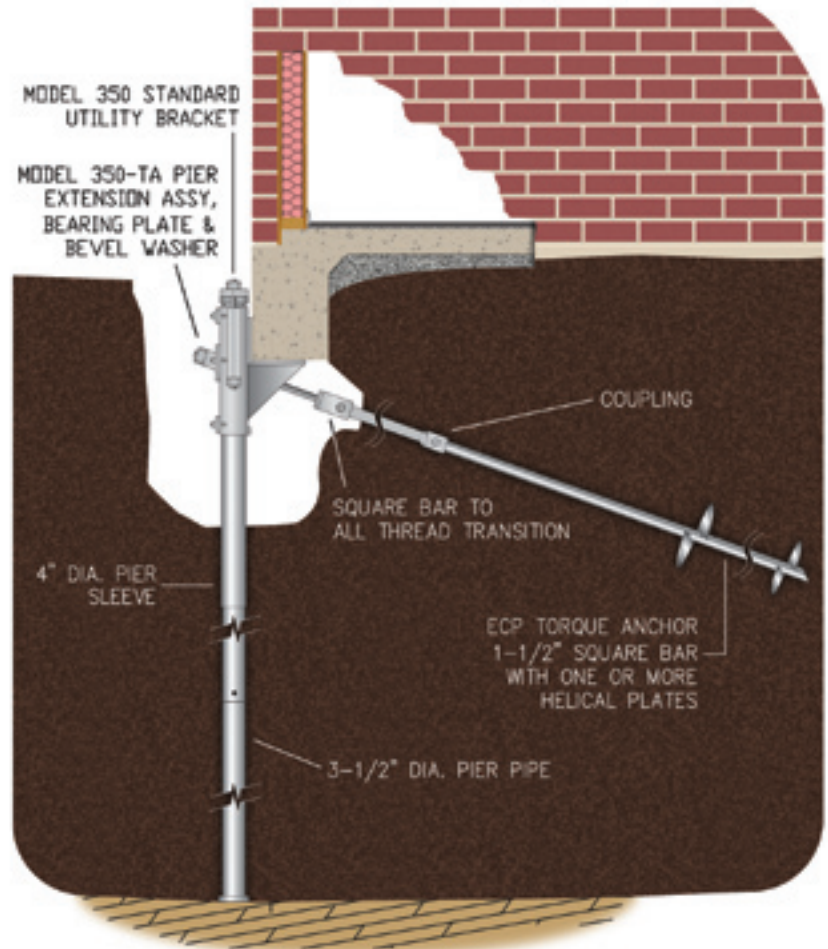
- Thomas Edison

## Best of Both Worlds; Lateral and Vertical Support!

ECP is proud to introduce a product that will provide both vertical and lateral support to a structure at each pier placement. What makes this combination of products special is that it puts you in a position to present a solution to the architects and engineers which largely consists of components within your standard inventory.

As you know space is becoming a premium in our cities and many architects are designing new basements adjacent to existing structures. This product combination allows the pier to support the existing building weight at the edge of the proposed adjacent basement excavation, while the tieback prevents lateral movements toward the excavation and subsequent damage to the building. With an external pier sleeve installed to three feet beyond the bottom of the proposed basement excavation, the new basement can be dug right up to the edge of the pier pipe.

In most cases as the excavation progresses, shoring or shotcrete is used to retain the soil under the existing structure. Many times this shoring material becomes part of the forming for the new concrete basement wall.



Other applications for this product combination are to provide lateral force to stabilize movement of an exterior footing relative to the floor, to restrain outward rotation of the bottom of a settled footing, or to provide support to structures situated on sloping sites. Due to the inherent dangers with deep excavations adjacent to existing structures or the possibility of soil instability under structures situated on hillsides, we strongly suggest that this product be installed under the direction and supervision of a registered professional engineer.

## Launch Your Safety Program

Obviously, safety is important to the space program at NASA but it is also very important where you work. Nothing less than the future of your family is at stake. They are counting on you to provide food and shelter, and on the job accident could very easily disable you and leave their security and future plans up in the air. Teamwork is just as important to your own job safety as it is to NASA astronauts. When people work together, participating and exchanging ideas, there is no end to what they might accomplish.

Together, you and your co-workers can get your own safety program off the ground by giving your supervisors or safety leaders' ideas on how your work environment can be made safer. Any idea, no matter how insignificant it may seem to you, may prevent a serious accident.

In short, safety takes teamwork – whether on the moon or in the office. A joint effort will launch your safety program. Therefore, whatever your job status or whatever your duties include, keep your eyes open for safety ideas and report them. Get your safety program off the ground today!